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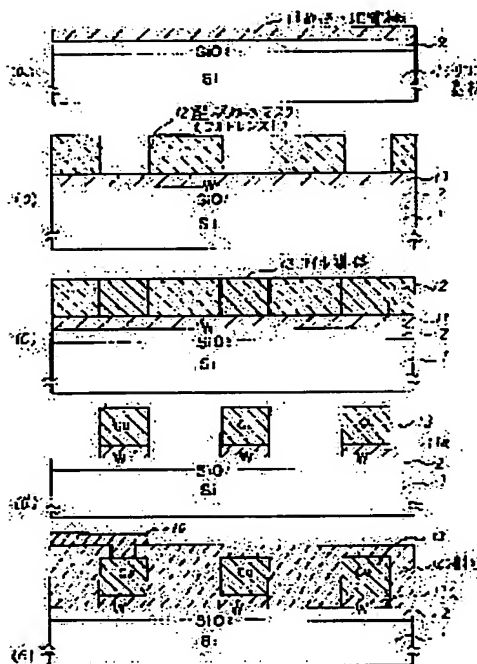
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(54) MANUFACTURE OF THIN-FILM COIL

(57)Abstract:

PURPOSE: To obtain a thin-film coil in which a thick film for a high-quality and high-Q-value coil conductor is realized in the small number of processes by a method wherein a photoresist is used as a plating mask, the coil conductor is electrodeposited and formed in a part in which a plated substratum electrode is exposed, the plated substratum electrode other than the part of the coil conductor is etched and a resin is coated.

CONSTITUTION: An SiO₂ film 2 is formed on a silicon substrate 1, and a thin-film plated substratum electrode 11 which uses W as a metal material is vapor-deposited in the whole region on the surface. Then, the plated substratum electrode 11 is coated with a positive-type photoresist, the photoresist is exposed and developed, and a selective plating mask 12 corresponding to a desired coil pattern is formed. In succession, a Cu electrolytic plating operation is performed, and coil conductors 13 are electrodeposited and formed selectively on the exposed face of the plated substratum electrode 11. Then, the mask 12 is stripped, a plasma etching operation is conducted to the plated substratum electrode 11, and parts other than parts 11a covered with the coil conductors 13 are removed. After that, the whole face of the substrate 1 is coated with a polyimide resin 14 so as to cover the coil conductors 13.



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